

**Two new records of marine amphipods
from the Canary Islands:
Amphilochus manudens Bate, 1862
and *Metopa propinqua* Sars, 1892**

Riera^{1*}, R. & Martín-Sosa², P.

¹ Centro de Investigaciones Medioambientales del Atlántico, Av. Los Majuelos, 115
38107 Santa Cruz de Tenerife, Tenerife, islas Canarias

² Centro Oceanográfico de Canarias, Instituto Español de Oceanografía
Dársena Pesquera, parcela 8, 38180 Santa Cruz de Tenerife, Tenerife, islas Canarias

* Corresponding author: rodrigo@cimacanarias.com

RESUMEN

Se citan dos especies de anfípodos *Amphilochus manudens* Bate, 1862 y *Metopa propinqua* Sars, 1892 por primera vez para Canarias. La distribución geográfica de ambas especies se amplía de forma significativa porque estos registros constituyen su extremo meridional para el Atlántico Noreste. Las dos especies fueron recolectadas en fondos circalitorales arenosos (85-162 m) en el banco de Amanay (SO de Fuerteventura).

Palabras clave: Crustacea, Amphipoda, *Amphilochus*, *Metopa*, islas Canarias, Océano Atlántico.

ABSTRACT

Two amphipod species (*Amphilochus manudens* Bate, 1862 and *Metopa propinqua* Sars, 1892) are first recorded for the Canaries. The geographic distribution of both species is largely enlarged by the present records since they constitute the southernmost limits in the NE Atlantic. The two species were recorded from circalittoral sandy seabeds (85-162 m) in the Amanay mount (SW Fuerteventura).

Key words: Crustacea, Amphipoda, *Amphilochus*, *Metopa*, Canary Islands, Atlantic Ocean.

1. INTRODUCTION

The deep sea floor is a vast habitat, covering ca. 65% of the Earth's surface (SVERDRUP et al. 1942). Sandy seabeds are the dominant habitat in the deep sea, though bare rock exist in several areas (e.g. sea-mounts, ridges, etc.) (GAGE & TYLER, 1991). Oceanographic conditions of the deep ocean have received attention in the last decades and thus, detailed information is known about physicochemical variables of the deep sea, being an extreme environment, i.e. high pressure, low temperatures and scarce food input (THIS-TLE, 2003). However, biological communities have been neglected for many decades and deep sea habitats are still amongst the lesser-known ecosystems on the planet (TYLER, 2003).

The LIFE+INDEMARES project has been studying the deep sea habitats from Spain. A total of 10 marine areas were surveyed throughout the 6-year project, and two of them [Concepcion seamount (code: INCOECO) and South of Fuerteventura (INFUECO)] are located in the vicinity of the Canary Islands.

In the present study, two amphipod species are first recorded in the Canary archipelago from samples collected in Amanay seamount, off Fuerteventura during the surveys conducted in 2010 (INFUECO 2010) and 2011 (INFUECO 2011).

2. MATERIAL AND METHODS

Sediment samples were collected by a mega box corer in June 2011. Samples were fixed by 4% formaldehyde during 48 hours and then, sieved in a 0.5 mm mesh size. Specimens were separated under a stereomicroscope and preserved in 70° ethanol. Specimens were identified by means of a stereomicroscope Nikon SMZ-800 and pictures were taken with an attached camera (EOS-500D).

The studied specimens were stored in the invertebrate collection of CIMA (Centro de Investigaciones Medioambientales del Atlántico SL).

3. RESULTS

Class **MALACOSTRACA** Latreille, 1802
Superorder **PERACARIDA** Calman, 1904
Order **AMPHIPODA** Latreille, 1816
Family **Amphilochidae** Boeck, 1871
Genus *Amphilochus* Bate, 1862

Amphilochus manudens Bate, 1862
Amphilochus manudens Chevreux & Fage, 1925: 114, fig. 109;
Ruffo, 1982: 75, fig. 50.

Studied material: Fuerteventura: Amanay seamount (coordinates: 28,26318°N/-14,80152°W), 6 individuals (4 females and 2 anterior fragments), 12th June 2011, 133 m deep. Fuerteventura: Amanay

seamount (coordinates: 28,26343°N/-14,809048°W), 22 individuals (15 juveniles, 4 females, 3 males), 11th June 2011, 162 m deep.

Description: Length 2.5 mm. Rostrum short and acute. Eyes round. Antennae subequal. Coxal plates dentate on the distal margin. Gnathopod 1-2 propodus with a prolongation prolonged to acute tooth. Gnathopod 2 carpus reaches palm, convex and dentate. Epimeral plate 3 with upwards curved corner. Pereiopods long, with merus broad. Telson with single point. Sexual differences can be noticed at the head region, with a greater rostrum in males, as well as antennae 1 are larger than antennae 2.

Accompanying fauna: The sampling stations were dominated by the spionid polychaete *Aonidella dayi* and one species of amphipod belonging to the family Haustoriidae. Other species well represented were the polychaetes *Aponuphis* sp., *Aricidea catherinae* and *Brevicirrosyllis weismanni*.

Distribution: North East Atlantic. Arctic Ocean. Mediterranean Sea (Ruffo, 1982). This species has been collected mainly in circalittoral rocky reefs (Ledoyer, 1977). This record constitutes the southernmost limit of the present species.

Family **Stenothoidae** Boeck, 1871

Genus ***Metopa*** Boeck, 1871

Metopa propinqua Sars, 1892

Metopa propinqua Lincoln, 1979, 181, fig. 86a-h.

Studied material: Fuerteventura: Amanay seamount (coordinates: 28,26318°N/-14,80152°W), 6 individuals (2 females, 2 juveniles and 2 anterior fragments), 12th June 2011, 133 m deep. Fuerteventura: Amanay seamount (coordinates: 28,19468°N/-14,78498°W), 1 individual (1 female), 8th July 2010, 85 m deep.

Description: Length *ca.* 2.1-2.5 mm (fragmented adults in bad condition). Coxal plate 4 distal margin sinuous. Head with triangular lateral lobes, apex acute. Eyes large and rounded. Antenna 1 slightly larger than antenna 2, almost half body entire size, peduncle article 1 equal to length of 2-3 combined, flagellum larger than peduncle. Antenna 2 with flagellum similar in length to articles 4-5 combined. Gnathopod 1 small, propodus slender and little shorter than carpus, palm not delimited, margin with 3-5 long setae, dactylus inner margin setose. Gnathopod 2 robust, propodus oval, palm oblique and convex, with small tooth and spine. Pereiopods 5-7 short and robust, merus broad, pereiopod 7 merus large. Pereiopods 6-7 basis slightly larger than the remaining ones. Uropod peduncle, with 3 small marginal spines. Telson oval, slightly elongated, with 3 pairs of small stout dorsal spines, apex rounded.

Accompanying fauna: The sampling stations were dominated overwhelmingly by the copepod calanoid (Calanoida sp1). Other species well represented were the spionid poly-

chaete *Aonidella dayi*, the syllid polychaete *Streptodonta pterochaeta* and the mollusk *Limopsis minuta*.

Distribution: Amphiatlantic (Lincoln, 1979; Grabe, 1996). This species has been collected in circalittoral sandy seabeds (50-200 m) (Stephensen, 1942). This record represents the southernmost limit of this species in the NE Atlantic.

4. ACKNOWLEDGEMENTS

This contribution was funded by EC Life+ INDEMARES (cod. N° 110300900, www.indemares.es). To staff of CIMA SL for collection samples during field surveys. To Leopoldo Moro (Environmental Agency of the Canarian Government) for taking the pictures of *Amphilochus manudens*, necessary for the identification of this species.

5. REFERENCES

- CHEVREUX, E. & L. FAGE. 1925. Amphipods. *Faune France*, 9: 1-488.
- GAGE, J.D. & P.A. TYLER. 1991. *Deep-sea biology: a natural history of organisms at the deep sea floor*. Cambridge University Press, Cambridge, 504 pp.
- GRABE, S.A. 1996. Composition and seasonality of nocturnal peracarid zooplankton from coastal New Hampshire (USA) waters, 1978-1980. *Journal of Plankton Research*, 18(6): 881-894.
- LEDOYER, M. 1977. Contribution a l'étude de l'écologie de la faune vagile profonde de la Méditerranée nord occidentale, 1: les gammariens (Crustacea: Amphipoda). *Bolletino del Museo Civico di Storia Naturale, Verona*, 4: 321-421.
- LINCOLN, R.J. 1979. *British marine amphipoda: Gammaridea*, British Museum (Natural History), London, 1-657.
- RUFFO, S. 1982. The Amphipoda of the Mediterranean. Part I. Gammaridea (Acanthonotomatidae to Gammaridae). *Memories de Institute Oceanographique*, 13: 1-364.
- STEPHENSEN, K. 1942. The Amphipoda of N. Norway and Spitzbergen with adjacent waters. *Tromsø Museum Skrifter*, 3(4): 363-526.
- SVERDRUP, H.U., M.W. JOHSON & R.H. FLEMMING. 1942. *The Oceans*. Prentice-Hall, Englewood Cliffs, New Jersey, 1087 pp.
- THISTLE, D. 2003. *The deep-sea floor*: In: Ecosystems of the World. Ecosystems of the Deep Ocean (ed.) Tyler, P.A., Elsevier, 5-39.
- TYLER, P.A. 2003. *Ecosystems of the deep oceans*, Elsevier Science, Amsterdam, The Netherlands, 569 pp.